REMARKS

Claims 1, 3-16, and 18-38 are currently active.

The Examiner has rejected Claims 1, 16, 37 and 38 as being anticipated by Ganmukhi. Applicant respectfully traverses this rejection.

Ganmukhi teaches a hierarchical scheduler includes a first level of schedulers that matches a plurality of sessions having various quality of service requirements with different schedulers which are best suited for a particular quality of service class. The second-level scheduler than schedules the outputs from certain ones of the first level schedulers. A third level scheduler schedules any remaining outputs the first level schedulers with the outputs from the second-level scheduler to provide a hierarchical scheduler output. See column 2, lines 39-44.

Ganmukhi teaches the hierarchical scheduler 10 comprises an input 15, a first level of schedulers 17, a second-level scheduler 80 a third level scheduler 90 for providing an output 100. The input 15 comprises packets from a plurality of sessions which have a different operating characteristics. The input sessions are grouped into classes according to their quality of service. A first level of schedulers 17 comprises different types of schedulers.

The outputs of a group of the first level schedulers are provided to a second-level scheduler 80. The output of second level scheduler 80 is provided to a third level scheduler 90. The third level scheduler 90 also receives the output 22 of one of the first level schedulers 20. See column 2, line 65-column 3, line 19.

As is clear from the above description, and as the Examiner admits, Ganmukhi does not teach or suggest any type of a filtering mechanism. Accordingly, Claim 1 cannot be anticipated by Ganmukhi. Claim 16 is patentable for the reasons Claim 1 is patentable over Ganmukhi.

In regard to Claim 37, there is no teaching or suggestion in Ganmukhi of a scheduler having scheduled bitmaps which can contain multiple bits per connection to schedule different types of bandwidth.

In regard to Claim 38, there is no teaching or suggestion in Ganmukhi that the scheduler can enforce rate limiting in each level of the hierarchy.

Furthermore, the Examiner has taken a portion of the architecture taught by Ganmukhi and attempted to suggest that the second level of hierarchy scheduler 80 receives connections corresponding to the groups of connections associated with the first level

generator. However, a clear review of the teachings of Ganmukhi shows that the scheduler 80 schedules between the first scheduler output 32, the schedulers' outputs 42, 52 and 62, and the scheduler output 72. All of these outputs form one single group. To reiterate, they form a group, where group is in the singular.

The claim limitation refers to groups, where groups is the plural. The second level generator as defined by the Examiner using the architecture taught by Ganmukhi, shows that the static priority scheduler 90 receives groups but not from the first level generator, which the Examiner defines as scheduler 80. The second level generator in terms of the elements of Ganmukhi receives the output from the scheduler 20 which is not part of the first level generator (specified by the Examiner) and a single output from the scheduler 80 formed from the single group of outputs 32, 42, 52, 62 and 72. Thus, the interpretation of the elements taught by Ganmukhi in regard to the limitations of Claim 1 are not met because the second level generator is not associated with connections corresponding to the groups of connections associated with the first level generator. The same holds true for Claim 16. Claim 37 has the limitation of a scheduler having schedule bitmaps. Claim 38 has the limitation of the scheduler can enforce rate limiting at each level of the hierarchy. Ganmukhi does not teach these limitations.

The Examiner has rejected Claims 2, 3, 17, 18, 26, 27, 28, 33, 34 and 35 as being unpatentable over Ganmukhi in view of Lahat. Applicant respectfully traverses this rejection.

As explained above, the Examiner has applied interpretations to the elements of the architecture taught by Ganmukhi to try to arrive at applicant's claimed invention. In fact, the outputs the Examiner suggests form a group or groups are in fact individual outputs that only come from their respective scheduler. By definition, if the group was inactive, the scheduler would have nothing to send, so there be no reason to need an additional filter mechanism which filters out inactive groups of connections. Thus, it would not be obvious, nor would there be any reason why one skilled in the art would take the teachings of Ganmukhi and apply any type of filter mechanism as found in Claim 2, now Claim 1. Lahat only teaches a filter to pass only optical signals having a particular frequency. See column 8, line 47. This has nothing to do with the claimed limitation of filtering out connections.

Referring to Lahat, there is disclosed an asynchronous transfer mode switch utilizing optical wave division multiplexing. Lahat teaches wave division multiplexing technology enables the simultaneous transmission of multiple data channel connections on the same physical optical fiber. This is achieved by utilizing several different wavelengths of the same optical fiber at the same time. See column 3, lines 37-41 of Lahat. Lahat teaches an

ATM switch which utilizes an all optical switching fabric to form switching functions. The switch is based on fiber optics and dense wavelength division multiplexing. See column 4, lines 16-23.

It is black letter patent law that teachings of references cannot be combined unless there is a teaching or suggestion in the references themselves to combine the teachings the Examiner is relying upon to arrive at applicant's claimed invention. Here, there is no such teaching or suggestion. Not only is there no teaching or suggestion to combine these references, but they cannot be combined because they are so distinct from each other. Ganmukhi teaches a scheduler for a standard switching system while Lahat teaches an all optical switching fabric. The Examiner cannot ignore the context in which the teachings are found. These contexts of an optical switching fabric and a standard switching scheduler are simply incompatible. It will require significant design and development work to try to figure out somehow or other to use the scheduler taught by Ganmukhi and all optical switching fabric taught by Lahat. This only further proves that applicant's claimed invention is not obvious.

It is respectfully submitted that the Examiner is using hindsight to arrive at applicant's claimed invention. The Examiner is using applicant's claim limitations as a roadmap to find the different limitations in the different references, and having found them, concluding that applicant's claimed invention is arrived at. This is not patent law.

The Examiner cites Lahat for the simple reason that Ganmukhi does not teach a bit map generator for generating schedule bitmap indicating the group to be scheduled for service or a filter mechanism. Lahat does not teach or suggest a scheduler having a first level generator or a second level generator or a scheduler that is based on a schedule bit map, as found in Claim 37 or a filter mechanism as found in Claim 1. For the reason that Ganmukhi nor Lahat teach or suggest the limitations of applicant's claimed invention, a scheduler, or a filter mechanism which filters out inactive connections, Ganmukhi in view of Lahat does not teach or suggest any of the claims of applicants.

Moreover, it is clear the only reason that the Examiner is combining these references is through the use of hindsight from applicant's claimed invention. It is also not patent law to use hindsight from applicant's claims, nor to have applicant's claims serve as a road map to find the various elements of applicant's claims and different limitations, and having found the various elements and different limitations, conclude that applicant's claimed invention is patentable. There must be some teaching in the references themselves to combine them, and there is none.

In addition, the teachings of the references cannot be taken out of the context in which they are found. Ganmukhi teaches a hierarchical scheduler while Lahat teaches an

optical switch. It would require undue experimentation and development to figure out how to combine them to arrive at applicant's claimed invention.

Accordingly, the applied art of record, separately or in combination, does not anticipate nor make obvious any of applicant's claims.

Accordingly, Claims 1, 3, 16, 18, 26, 27, 28, 33, 34 and 35 are not obvious over the applied art of record.

Claim 36 has the limitation of a scheduler having a schedule bitmap and active bit maps which indicate which connections are active, the scheduler filters out inactive connections from the schedule bitmap by ANDing schedule bitmap with the active bit maps. The applied art of record does not teach or suggest this limitation.

Claim 37 has the limitation of a scheduler having schedule bit maps which can contain multiple bits per connection to schedule different types of bandwidth. The applied art of record does not teach or suggest this limitation.

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1, 3-16, and 18-38, now in this application be allowed.

Respectfully submitted,

MEENARACHAGAN VISHNU

By _____
Ansel M. Schwartz, Esquire
Reg. No. 30,587
One Sterling Plaza
201 N. Craig Street
Suite 304
Pittsburgh, PA 15213
(412) 621-9222

Attorney for Applicant

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Ansel M. Schwartz
Registration No. 30,587